

U.S.S.N. 09/201,072-1102
Filed: November 30, 1998
Group Art Unit: 3739
Examiner: D. Shay
Attorney Docket No. 101327-125

REMARKS

The following remarks are presented in response to the Office Action dated July 30, 2001. A request for continued examination is submitted herewith. Reconsideration and allowance are respectfully requested.

Informalities

The Office Action of July 30, 2001 rejects the pending claims under 35 U.S.C. 112, second paragraph, as failing to recite further structure in the statements that describe Applicant's fiber as being "suitable for coupling" to various lasers and "suitable for conducting radiation." Applicant respectfully disagrees. While the referenced phrases are functional in nature, these functions are well understood by one skilled in the art.

For example, one skilled in the art would know how the proximal end of a fiber is made suitable for receiving radiation. One well known way is to polish the fiber end flat, such that it can be aligned in a laser beam path to receive the radiation beam.

In each instance, the functional recitations are believed to clarify the meaning of the claim. However, if the Examiner so wishes, Applicant will delete these phrases or use alternative language. This type of amendment might best be addressed in a telephonic interview and the Examiner is urged to call the undersigned to discuss such amendments, if they are still deemed necessary in light of these remarks.

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Terminal Disclaimer

In response to the rejection of the claims in the July 30, 2001 Office Action on obviousness-type double patenting grounds, in light of related U.S. Patent No. 6,159,203, Applicant submits herewith a Terminal Disclaimer, as proposed by the Examiner, disclaiming the terminal part of any patent granted on the above-identified application, which would extend beyond the expiration date of the full statutory term of commonly owned United States Patent No. 6,159,203.

Prior Art Rejections

The claims also stand rejected under 35 U.S.C. 103(a) as obvious in light of U.S. Patent No. 4,672,969 (Dew) in combination with U.S. Patent No. 4,822,136 (Hicks, Jr.). Applicant again respectfully disagrees.

The Dew reference is actually compelling evidence of the inventiveness of the present invention, and instructive with regard to the state of the art at the time the Applicant's invention was made. Dew is concerned with converting biological tissue into a collagenous substance for facilitating healing and wound closure. He sought to develop a laser tool that would emit radiation at a wavelength other than the 1.06 micrometers (the primary mode of Nd:YAG lasers) in order to reduce water and blood absorption peaks that are present in this region of the spectrum. Dew sought to minimize the interference that water/blood absorption of radiation would pose for his protein denaturing process. He chose a secondary emission wavelength of Nd:YAG lasers (at 1.32 micrometers) and more generally suggested the use of radiation in the range of 1.2 to 1.4 micrometers.

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Dew's selection of 1.4 micrometers as his upper cut-off point underscores the conventional thinking of those working in the field of phototherapy that wavelengths above 1.4 could not be utilized because of the high losses of fibers at such wavelengths.

Moreover, the Dew reference would provide no motivation to go looking for a way to transmit radiation in this wavelength range, because water absorption actually *increases* above 1.4 micrometers. (See Fig. 2 of the present application.) Hence, Dew's method of denaturing proteins would have encountered the same problems above 1.4 micrometers as the reference identified with radiation at 1.06 micrometers.

The Hicks, Jr. reference does not complement the teachings of Dew. Hicks, Jr. teaches the addition of fluorine to optical fibers for use in telecommunications as a way to reduce hydroxyl ion content and improve signal transmissions at 1.34 micrometers. Hicks, Jr. is neither concerned with medical applications of laser energy, nor the wavelength range of 1.4 to 2.2 micrometers recited in Applicant's claims.

Conclusion

For all the reasons above, reconsideration and allowance are requested.

A request for continued examination and a request for a two-month extension of time up to and including December 30, 2001 are also submitted along with the required fees. In the event that any additional fees are required, please charge Deposit Account No. 141449.

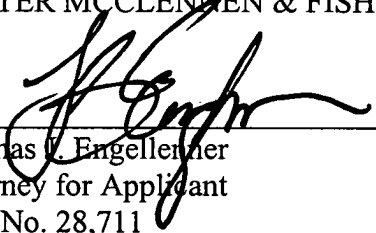
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In the event that this response is not deemed sufficient to place this case in condition for allowance, Applicant's representative requests an opportunity to conduct an interview with the Examiner prior to the issuance of another office action. In order to expedite prosecution, the Examiner is urged to telephone the undersigned Attorney for Applicant at the telephone number indicated below, if there are any remaining issues.

Respectfully submitted,

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Date: December 14, 2001


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